

Missouri Department of Natural Resources

Total Maximum Daily Load Information Sheet

Bowling Green Lake (OLD)

Water Body Segment at a Glance:

County:	Pike
Nearby City:	Bowling Green
Water Body ID:	7003
Size of Lake:	28 acres ¹
Watershed Size:	1.3 square miles
Pollutants:	Nitrogen and phosphorus
Source:	Nonpoint sources



Statewide Map Showing Location of Watershed

Scheduled for TMDL development: 2016

Description of the Problem

Designated beneficial uses of Bowling Green Lake:

- Livestock and Wildlife Watering
- Protection of Warm Water Aquatic Life
- Drinking Water Supply
- Protection of Human Health (Fish Consumption)
- Whole Body Contact Recreation – Category B

Uses that are impaired:

- Protection of Warm Water Aquatic Life

Standards that apply

- Site-specific nutrient criteria for Bowling Green Lake (old) are found in Table M of Missouri's Water Quality Standards at 10 CSR 20-7.031. Table M states that total phosphorus concentrations should not exceed 21 micrograms per liter ($\mu\text{g/L}$), total nitrogen concentrations should not exceed 506 $\mu\text{g/L}$, and total chlorophyll concentrations should not exceed 5 $\mu\text{g/L}$.

Background information and water quality data

Bowling Green Lake is located northeast of the municipality of Bowling Green and impounds an unnamed tributary of Noix Creek in Pike County. The state judges water bodies with site-specific nutrient criteria to be impaired if the lower 60 percent confidence limit of the available nutrient data

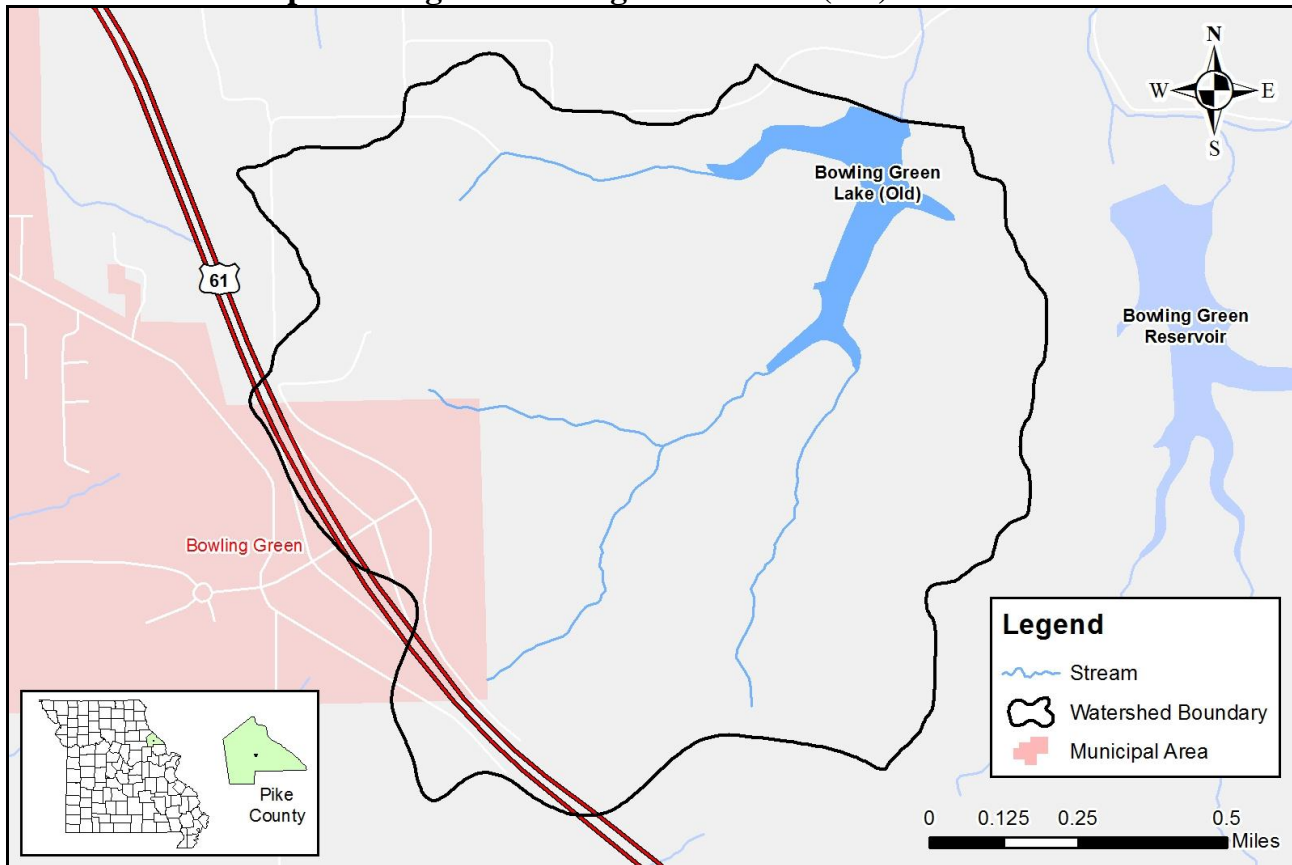
¹ This lake is erroneously listed as being 7 acres in size in the state water quality standards.

exceeds any of the criteria values. Nutrient data for Bowling Green Lake was collected in 2003 to 2010. The lower 60 percent confidence limit for available nitrogen and phosphorus data was found to be exceeding the criteria for these pollutants. For this reason the department judged Bowling Green Lake to be impaired for total nitrogen and total phosphorus. Recent assessment data also shows that the lower 60 percent confidence limit of the available chlorophyll data also exceeds the site-specific criterion for this parameter as well.

Nutrient Assessment Data

Log LCL(60) =	$((4.288)-((0.253)*(1.149)/6.16)) =$	4.214	TP LCL(60) =	68
Log LCL(60) =	$((6.926)-((0.253)*(0.574)/6.16)) =$	6.902	TN LCL(60) =	994
Log LCL(60) =	$((1.703)-((0.253)*(1.695)/5.57)) =$	1.626	TChl LCL(60) =	5.08

Map Showing the Bowling Green Lake (old) Watershed



Note: Final TMDLs developed for Bowling Green Lake will be based on the most current and available data and information.

For more information call or write:

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